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An EcoMobility certification system for cities

Technical brochure

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Global Alliance for
EcoMobility

Tabel of contents

1. INTRODUCTION

1.1 Aim of this brochure

With this brochure the EcoMobility SHIFT consortium intends to present the development of the certification system and its components to those that are interested in more in-depth information than what is already available on the SHIFT website. We welcome your comments and invite you to keep yourself updated by subscribing to our project updates. For subscription please send an email to **ecomobility.shift@iclei.org**

1.2 The EcoMobility SHIFT project

Our cities face a mobility challenge of increasing traffic, chronic congestion, air and noise pollution, increased traffic accidents – but this is against a background of global warming and the need to reduce our carbon consumption. The challenge for cities is to alter the balance of priorities from motorised vehicles to more sustainable and active modes. The EcoMobility SHIFT project is therefore establishing a process which will help cities to put a process in place to make the change, to measure the effectiveness of the change and to compare their achievements with other cities.

The EcoMobility SHIFT project (June 2010 – May 2013) is an activity of the Global Alliance for EcoMobility. It is co-funded by the European Agency for Competitiveness and Innovation (EACI) as part of its Intelligent Energy Europe (IEE) program. The project is being taken forward by eight partners: ICLEI - Local Governments for Sustainability, Edinburgh Napier University, Mobiel 21, Traject, Trivector Traffic, I-CE – Interface for Cycling Expertise, Municipality of Burgas and Municipality of Miskolc (see under 1.5). The tasks to be performed are housed in Work Packages (WPs). Each WP is coordinated by one member of the project team.

1.3 Project aim and results

EcoMobility SHIFT aims at creating a certification scheme to assess and help improve local governments' sustainable transport policies. Municipalities will be able to obtain an 'EcoMobility Label'. The EcoMobility certification scheme is meant for local governments or groups of municipalities responsible for transport policies in an urban region as a whole. The scheme is viewed to be:

- A static measure of overall achievement in EcoMobility (using output and outcome indicators), as well as;
- A dynamic measure of process (using a quality management system);
- A realistic external comparative tool, as well as a practical internal management tool (using benchmarking indicators, QMS and auditing procedures);
- As objective and standardized as possible;
- Bringing in the users point of view;
- Issuing labels for a limited period of time;
- Practical and affordable, ideally be available in many languages.

In a long-term perspective, the certification system aims to:

- Support and promote EcoMobility behavior (reduce the need to travel at the first place and, when travel is needed, strive for sustainable means of transportation such as walking, cycling, and the use of collective transports), reducing car use and ownership;
- Stimulate the set-up of EcoMobility related policies, infrastructure and services;
- Lower transportation related greenhouse gas emissions and pollution, and promote energy efficiency;
- Increase traffic safety, particularly for pedestrians, cyclists, and all other non-motorized participants;
- Promote an urban planning supporting EcoMobility;
- Improve citizens' quality of life and health.

The system will promote these long term goals by creating an incentive for cities to obtain such Labels and a positive competition atmosphere between them.

1.4 A comprehensive and beneficial scheme

There are already a number of quality management and assessment schemes. There are, in addition, awards that stimulate cities to invest in EcoMobility. However, there is not yet a system that

Is applicable to the entire city territory;

- Covers achievements as well as dynamic elements of transport planning;
- Assesses the sustainability of local transport policies in a holistic way;
- Allows for a Label publicly recognizing cities' achievements.

Possible benefits of being awarded a Label include:

- Civic pride (public recognition of EcoMobility efforts);
- Improving the quality in decision-making processes about Eco-Mobility services and investments in infrastructure through a quality management process;
- Benchmarking (to enable cross reference between areas to show relative achievement);
- Political accountability (to offer the electorate a means of ensuring the achievement of local administration);
- Access to knowledge and good practice examples;
- Group feeling (by joining the exclusive group of certified cities);
- Resource allocation and easier access to funding.

1.5 Project consortium

The EcoMobility SHIFT project team is composed of eight partners:

ICLEI - Local Governments for Sustainability, Bonn, Germany

Coordinator of the EcoMobility SHIFT project
Leader of WP2 – Definition of the EcoMobility labelling scheme.

ICLEI is an international association of local governments as well as national, regional and local government organizations that have made a commitment to sustainable development. The World Secretariat is responsible for implementing, among others, ICLEI's sustainable transport program, EcoMobility.

Napier University, Edinburgh, United Kingdom

Leader of WP3 – Definition of EcoMobility criteria and QMS.

Research and consultancy activities in the University's Transport Research Institute (TRi) cover topics relevant to SHIFT including transport safety, transport & society, transport psychology, pedestrian & mobility planning, travel behaviour and transport policy & economics.

Mobiel 21, Leuven, Belgium

Leader of WP4 –Set up of the auditing system and training of auditors.

Mobiel 21 is a center for knowledge development, education and behavioral change in the field of sustainable and safe mobility. Mobiel 21 is a private, nonprofit company, and encourages safe and sustainable mobility in the 21st century. M21 organizes his work with an integrated approach starting at the research preparing demonstrations and pilot projects, over to dissemination of knowledge and finishing at influencing mobility behavior.

Traject, Brussels, Belgium

Leader of WP6 – Consultation and feedback.

Traject is a small independent consultancy specialized in Mobility Management, with offices in Brussels and Gent. It was founded in 1992. Traject stands for a user oriented approach of transport and mobility and works for different kinds of clients: enterprises, institutions, administrations, schools, stores, commercial centers or poles of attraction, recreation centers, event organizers; regions and zones; municipalities; transporters; regional, national and European authorities.

Trivector Traffic, Lund, Sweden

Leader of WP5 – Pilot of the labelling scheme and refinement of criteria and auditing system.

Trivector Traffic offers consulting services, research and development in the field of traffic and transportation. About one third of its turnover comes from research projects. One of our specialties is creating efficient, safe and more environmentally sustainable traffic systems. Several of its projects in the field of sustainable transport are among the most renowned of their kind in Sweden.

I-CE – Interface for Cycling Expertise, Utrecht, Netherlands

Leader of WP7 – Dissemination.

I-CE is an international NGO for low cost mobility and integrated cycling planning. I-CE cooperates with governments and civil society organisations in developing sustainable urban and transport planning, by utilising the possibilities of the bicycle. I-CE mainly operates as an interface, bringing about exchange and cooperation between professionals, governors and civil society.

Municipality of Burgas, Bulgaria

Burgas is one of the five pilot audit cities.

Burgas is the second-largest city and seaside resort on the Bulgarian Black Sea Coast with population of 210 260. It is also the fourth-largest city in terms of population in the country and it is the capital of Burgas Province. Located at the westernmost point of the Black Sea, the large Burgas Bay, Burgas has the largest and most important Bulgarian port. Today, it is a key economic, cultural and tourist centre of southeastern Bulgaria.

Municipality of Miskolc, Hungary

Miskolc is one of the five pilot audit cities.

Miskolc is a city in northeastern Hungary with a heavy industrial background. With a population close to 180 000, Miskolc is the third-largest city of Hungary. It is also the administrative, economic, educational and scientific center of the North Hungarian region, and also the capital of the Borsod-Abaúj-Zemplén county.

Three more cities are in the picture for pilot audits: East Dunbartonshire (UK), Lund (Sweden) and Turnhout (Belgium). Also an enlarged group composed of the project partners and of invited external experts representing the various EcoMobility fields was established: the Criteria Committee. Criteria Committee members not belonging to the core project team have kindly agreed to collaborate by providing suggestions and feedback and, in certain occasions, taking part in meetings.

Composition of the Criteria Committee

Planning and mobility in general	
• ICLEI	• Edinburgh Napier University
• Mobiel 21	• Traject
• Trivector	• Municipality of Miskolc
• Municipality of Burgas	• Municipality of Turnhout (pilot audit city)
• Municipality of Lund (pilot audit city)	• Simon Field, ITDP-Europe (external expert)
• Municipality of East Dunbartonshire (pilot audit city)	
Walking	
• Bronwen Thornton, Walk21 (external expert)	• Dulce Almeida, Universidade Lusofóna (external expert)
• Philip Insall, Sustrans (external expert).	
Cycling	
• Interface for Cycling Expertise	• Sara Basterfield, UK National Cyclists' Organization and European Cyclists Federation (external expert)
Public transport	
• Colin Black, Contemporary Transport (external expert)	
• Steve Cassidy, McLean Hazel (external expert).	

2. THE BASICS OF THE CERTIFICATION SYSTEM

2.1 Definition of EcoMobility

An 'Ecomobile City' is developing, improving and encouraging the use of alternatives to the private car. An 'Ecomobile City' is an attractive city with a safe environment and a high quality of life; which enables its users, both citizens and visitors, to meet their mobility needs without jeopardizing sustainability at the local or wider levels.

This means that:

- The city strives to reduce the need for travel and transport;
- The city ensures that its facilities and areas are accessible by all its users;
- The city ensures that an appropriate variety of modes of transport are available for all its users;
- The city encourages travellers to prefer the use of walking over cycling, cycling over public transport and public transport over the car;
- The city supports the operation of environmentally-friendly vehicles; and
- The city is continually striving to encourage the reduction of resource use for travel.
- The city is continually striving to improve its performance in planning and delivering of EcoMobility.

2.2 Components

The certification system is aimed to cover processes, services & products and results of sustainable transport planning. It will comprise the following components:

- Quality management system. A quality management system helps municipalities in measuring their work in EcoMobility and encourages progress. Cities can adopt a standard quality management system with indicators on processes, products & services, and results & impacts.
- Labelling scheme. A generic scheme based on the quality management system holds criteria that need to be met by a city before the EcoMobility Label can be attributed. These criteria and indicators enable benchmarking, the process of comparing a city's performance to best practices in EcoMobility. The Label shows a city's progress in quality management and achievements in transport planning (outputs and outcomes).
- Auditing procedures: the systematic and detailed procedures under which the actual performance of a city is checked by an auditor. Audits can be used to facilitate a self-assessment and recommend policy improvements, as part of the quality management system. They can also be used to decide which Label should be attributed, if the city is eligible to receive one.

The quality management system, the labelling scheme and the auditing procedures constitute the assessment framework for guiding cities in policy improvements and for guiding auditors in attributing the Label.

3. REVIEW OF EXISTING SCHEMES

3.1 Review set-up

A large number of existing schemes has been reviewed to seek to discover whether someone has already developed SHIFT or if not at least what SHIFT can take from existing schemes:

- How (and how well) do they function?
- How (and how well) are they used?
- In relation to our aspirations, to highlight any schemes that:
  - Cover process, outputs and/or outcomes – but preferably all three;
  - Allow user (citizen) input into the assessment of cities' quality, particularly with respect to outputs, but also potentially process;
  - Allow comparison/benchmarking between very different cities right across a continent;
  - Award labels to recognise achievement of a certain level of quality in process, outputs and/or outcomes.

The four main topic areas of research were:

- Benchmarking and sustainability indicators;
- Quality Management;
- Labelling;
- Auditing.

3.2 Key lessons from the review

A. There is a great deal of commonality between the QM schemes reviewed. Many of them have a common parentage, often going back to EFQM and ISO, all based around a set of criteria that define quality, evidence of which has to be provided by an organization. Benchmarking schemes are more disparate in approach in that different indicators are selected in each scheme. A small number of QM schemes also gather data on outputs and outcomes as well as the processes that the organisation in question follows; two in particular stand out, which are the Swedish Traffic Safety Audit, and the Swiss Energy City scheme.

B. The ambitions for the SHIFT scheme are not insignificant. It aspires to:

- Cover process, outputs and/or outcomes – but preferably all three.
- Allow comparison/benchmarking between very different cities right across a continent.
- Award labels to recognise achievement of a certain level of quality in process, outputs and/or outcomes.

There are no schemes reviewed that do all of these things.

C. The following problems could be anticipated with the development of the SHIFT scheme:

- A process that is perceived to be too time-consuming, complex or expensive, so the scheme is not used
- The scheme lacks credibility
- It proves impossible to combine an assessment of process with some measure of outputs/outcomes; and indicators are difficult to measure

D. From the review of schemes it is clear that schemes require an organisation to run them – this could be termed, potentially, an SHIFT expertise network, whose role would be:

- Role as expertise centre: overall building further expertise on QMS and supporting materials (particularly in the early years of the scheme),
- Overall promotion of the QMS annex label scheme
- Managing the database of SHIFT-users, registration of new member cities, …
- Monitoring and evaluation of SHIFT–user internal assessment reports + feed-back and review of the QMS-scheme (e.g. every two years)

Info and training sessions open for any interested stakeholders (cities and consultants)

Auditor training sessions that give access to certificate as SHIFT-adviser and auditor

Monitor and evaluate work of SHIFT advisers and auditors;

keeping list of certified advisers and auditors and assign auditor teams to cities

The following table considers the characteristics that the SHIFT scheme might seek to have, the existing schemes that inspire that characteristic, and further information that is required about those schemes to fully understand how they can inform the SHIFT scheme, It also identifies those schemes that could be the "building blocks" which the SHIFT scheme could follow closely in respect to that characteristic; and next steps in the process of building the SHFT scheme.

Proposed characteristics of SHIFT Scheme

Characteristic required	Scheme that already does this	Building block scheme for Ecomobility SHIFT	Next steps in building Ecomobility SHIFT
Indicators			
Uses robust and comparable output/outcome indicators, the data for which is not too costly or time-consuming to gather	Swedish Traffic Safety Audit; EnergieStadt; Siemens CMI; PAS500; PROSE; Ecodynamic Label	EnergieStadt Swedish Traffic Safety Audit	Project Task 3.2 on indicators – underway Understand how indicators function in building block schemes How supranational differences in framework conditions/background are taken into account
QM-system			
Assessment of outputs and outcomes – a checklist of minimum achievements prescribed in the scheme (to allow benchmarking) plus possibly city also able to define its own output and outcome targets and performance against these.	No schemes appear to have this combination	Unclear as to which existing schemes permit this. ISO9004?	As above What weight do output/outcome indicators receive in benchmarking exercises/ in overall assessment
User (citizen) input to assessment of process	BYPAD, perhaps	BYPAD, as it is the only known example	Review how this is carried out in BYPAD and decide whether to copy in SHIFT Investigate new options
User (citizen) input to assessment of outputs and outcomes.	Cycle Balance; Stadsmonitor; Prose	Cycle Balance, as this is a respected example	As above, for Cycle Balance
Offers different depths/degrees of assessment – from simple self assessment to external audit	MaxQ, EFQM, Public Sector Excellence, ISO9004, ISO9001	CAF, as this is the main inspiration for the non-ISO schemes that do this. Could build on MaxQ	Take MaxQ as starting point and consider what needs to be added/modified – how easy is it for someone to use; could ease of use be improved?
Assessment of process – both existence of elements of process, and the quality of that process	MaxQ, BYPAD, CAF, Public Sector Excellence, all EFQM-derived schemes, ISO9004	CAF, MaxQ, BYpad – justification as above	As above, but also consider whether this assesses all relevant aspects of process Find out most efficient/effective process assessment procedure: questionnaire? what type? Consensus building? Working with ladder of excellence? Individual interviews?
Audit			
For audit level of scheme, audit and feedback carried out by expert(s) – but not the same expert(s).	EnergieStadt, PROSE, CAF	EnergieStadt as this scheme appears robust and very user-oriented	Understand via interview how this works in EnergieStadt, Differences between EEA-countries?
Sound auditing practices and selection and training of auditors	ISO19011, CAF, BYPAD, Ecodynamic Label, INK, possibly EnergieStadt	CAF, BYPAD they are reasonably well-used; also Energiestadt, Swedish Road Safety Audit	Interview (could also be with EnergieStadt and Traffic safety audit)
Must be transparent, rigorous, credible, preferably ISO9001 accredited; and possess an organisation behind it.	ISO, CAF, BYPAD, Forum EEA, appear to have strongest organisations behind them	BYPAD – as a minimum. Forum EEA, SHIFT should seek ISO9001 accreditation	Understand minimum requirements and how we achieve them. Tied up with establishment of Ecomobility SHIFT organisation.

4. ECOMOBILITY SHIFT ASSESSMENT FRAMEWORK

4.1 Indicators

Gudmundsson[1] reviewed several definitions of an indicator in his work and uses the following definitions:

- "An indicator is a variable, based on measurements, representing as accurately as possible and necessary a phenomenon of interest."
- "An indicator of environmental sustainability in transport is a variable, based on measurements, which represents potential or actual impacts on the environment - or factors that may cause such impacts - due to transport, as accurately as possible and necessary."

There are different types of indicators: qualitative and quantitative, absolute and relative. Another typology used is the "production system" or the input-output-outcome approach[2] :

In this context we will use indicators to measure the process, output or outcome. For example, numbers of people killed on the roads per year is an indicator for the outcome of greater road safety. An alternative indicator might be people killed per 1000 population or per km travelled. Number of junction improvements carried out for safety reasons per year is a related output indicator. Number of people working on road safety in the municipality and their level of training are related process indicators.

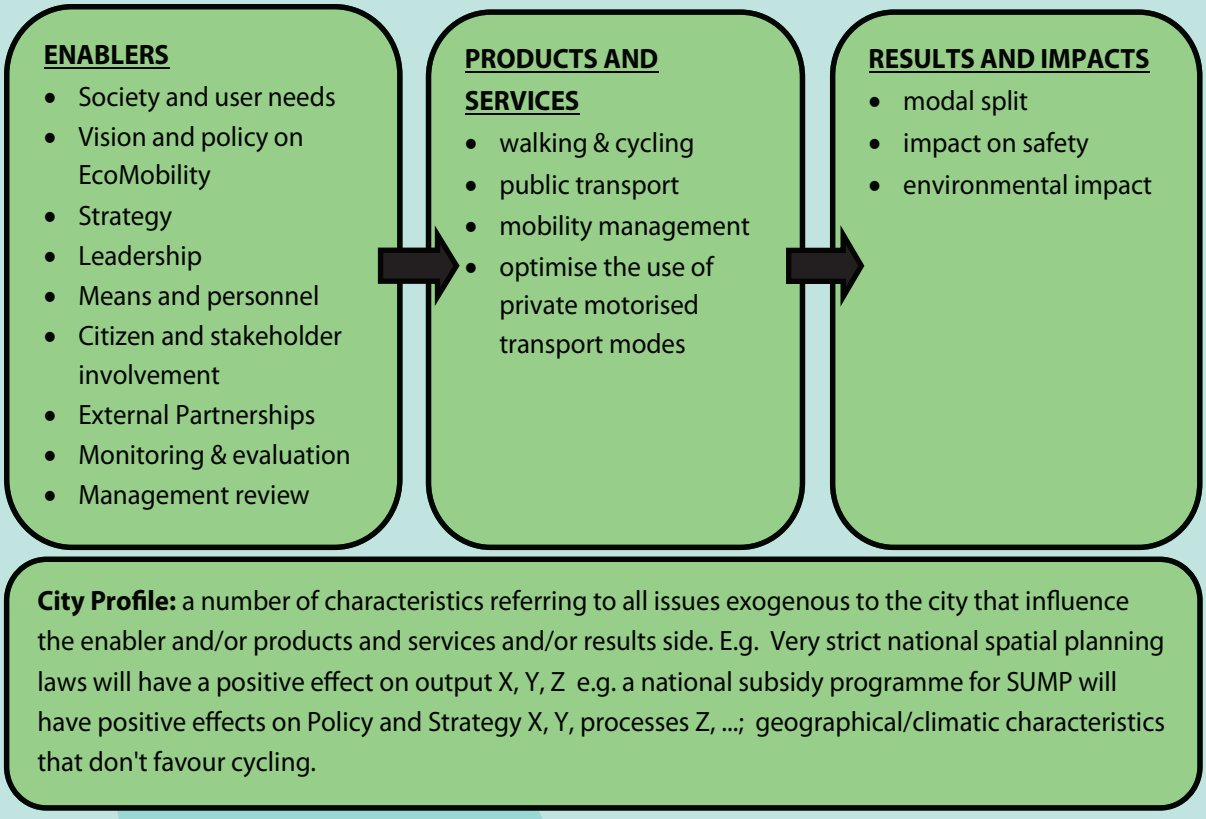
The initial set of product/service and result/impact indicators agreed by the partners and taken forward as drafts for consultation and 'active critique' in April 2011 are listed in Annex 1.

[1] Gudmundsson, Henrik et al (2010), Indicators of environmental sustainability in transport, An interdisciplinary approach to methods. Institut national de recherche sur les transports et leur sécurité – INRETS

[2] From Gudmundsson, Henrik et al (2010), Indicators of environmental sustainability in transport, An interdisciplinary approach to methods. Institut national de recherche sur les transports et leur sécurité – INRETS.

4.2 Assessment structure

The structure for QMS and labeling adopted as a draft for further work is as shown in Figure 6.



5. LABELLING SCHEME

5.1 Basic set-up

The process towards labelling may have three steps:

- An initial 'free' web means for a candidate city for internally assessing its EcoMobile status (using a set of indicator questions within the QMS structure) and to assist it by providing web advice on enhancing its status;
- The candidate city signing-up for an externally assisted/audited assessment of their EcoMobile status (using the full QMS structure) and the adoption of an agreed development and cyclical auditing programme; and
- An external assessment of a city's EcoMobile status relative to other cities and the award of a relevant label.

A key challenge for the EcoMobility SHIFT project is to define acceptable levels of achievement for cities, both in terms of the criteria against which their inputs, outputs and outcomes are evaluated, and in relation to the QMS, such that they can be awarded different levels in the labelling scheme. In order for the scheme to be credible, these levels must be transparent and easy to relate to a defined set of criteria, and they must not discriminate against or in favour of particular types of city (e.g. larger, smaller, those in Non Member States and so on). On the other hand, it may be that the project decides that the awards should take into account the starting position or the framework conditions of the city, so that they are awarded not only on the basis of their absolute achievements, but also in relation to what it is reasonable to expect a city to achieve in a given context. The project team pays high value to:

- Simplicity, opting for three rather than five labels;
- Completeness: encompassing all three categories Enablers – Products & Services – Results, with differences in weight among the labels;
- Reliability: classification of efforts underpinned by an assessment of the city's performance agreed by experts;

The team considers three labels, similar to Gold, Silver and Bronze:

- **Gold –** process in place and products and services being delivered and impacts actually achieved;
- **Silver –** process in place and products and services being delivered;
- **Bronze -** process in place.

In each category (Enablers, Products & Services and Results), the levels of achievement are expressed in scores scores for answers to questions using a relative scale (0-5 or 1-5) with potentially dissimilar marking levels (the one question is more important than the other) and thresholds for passing (e.g. 70% of maximum overall score). Details are being worked out.

5.2 Validity and revalidation

Label validity has to be defined. Between two and five years appears to be reasonable (with shorter periods for cities in a starting phase). It is possible that some Labels can be revalidated while cannot. For example, if a Label specifically for cities in a starting phase is established, it might be advisable that it can only be revalidated a few times, so that the city is given a strong incentive to move to a higher grade Label.

5.3 Publicity

Although the Labelling scheme is an essential component of the certification system, it might happen that a local government does not want to have their EcoMobility performance publically available. Instead, it might want to implement the quality management system without a Label attached. EcoMobility SHIFT should encourage that a Label is attributed (if the city is eligible to receive one), but the decision rests on the local government.

6. AUDITS

6.1 Goal

Audits are the detailed procedures under which the EcoMobility performance of a city is systematically checked against a set of criteria. The audit is carried out by an officially trained auditor external to the city. Audit reports form the basis to recommend policy improvement under the quality management system as well as to attribute the EcoMobility Labels.

6.2 Procedures

Audit procedures aim to ensure comparability between audit reports so that the certification system is seen as trustworthy. Detailed audit procedures will be set out later in the project. Important steps include:

• Assessment of available information;
• Determining which further information is needed and which indicators will be used (given that some indicators might eventually be replaced by alternative ones);
• Collecting data, documents, and carrying out ground assessments and consultation processes;
• Preparing the audit report.

6.3 Collecting data

Methods to collect information depend on the indicator in question. Generally, it can be said that quantitative indicators based on trustworthy collection methodologies (e.g., Census and other data retrieved by statistical organizations) should be preferred. Data obtained by the Municipality may also be used when collection and calculation methodologies are sound. It is highly probable that audits will also have to resort to this kind of information because official statistics rarely enter into details related to urban planning and mobility. Alternatively, it might be possible to calculate some of the indicators with the aid of software (e.g., GIS software) provided that the necessary data sources are available. Indicators can also be qualitative in nature. Information in this case may be based on expert judgment or on the answers provided by consultation processes (with the public, user groups, other organizations, etc.). Additionally, information for policy indicators may be obtained from official documents such as Council decisions and official plans. As a general rule, third-party information should be cross-checked by expert judgment based for example on ground assessments in order to rule out obvious mistakes and to spot suspicious values that need validation.

The list of indicators will most likely contain examples of the various kinds described above. Both quantitative and qualitative indicators will be used. If data shortcomings are too large, it might be advisable to postpone the audit and to determine which minimum data collection systems must be implemented prior to it.

6.4 Audit report

Audit reports detail the performance of a city against the criteria and the proposed Label, if applicable. All statements must be justified. An audit report consists of:

- Overview and global opinion about the city regarding EcoMobility friendliness;
- Detailed assessment of city performance regarding each indicator, stating and explaining the achieved grade. If applicable, territorial considerations might be included as well (e.g., if EcoMobility infrastructure exists in several parts of the city or is concentrated in particular places). The assessment may be structured around strengths and weaknesses and supplemented with illustrative photographs. Assessment methodologies should also be referred;
- Proposed Label to be awarded, if applicable, and a detailed supporting explanation;
- Suggestions for improvement.

7. ORGANIZATIONAL STRUCTURE

A structure could be envisaged thereby SHIFT member cities that use the QMS-framework at least once (they have carried out a self-assessment exercise) become SHIFT-user city. In order to get this certification they would simply have to submit their internal audit annex improvement plan to the SHIFT- expertise network. So, no real verification of this document is needed, and no Label would be awarded.

The SHIFT network would then offer to its members coaching on how to achieve SHIFT status. This would follow, more or , the coaching model of CAF, BYpad, MaxQ. The adviser/consultant would play the role of facilitator in the self-assessment procedure (or internal audit procedure) carried out by an assessment panel in the city. Some remarks on this are as follows:

- This coaching by a certified SHIFT-adviser is not obligatory, a city can decide to adopt the scheme by itself - for example, a city that is

currently already using Bypad or is experienced in another QMS might not be interested to spend the money for the internal audit procedure.

- The coaching is tailor made meaning that the city can choose from a range of tasks (cf. CAF):
  - the consultant might be asked to facilitate the consensus and prioritization meeting,
  - the consultant might be involved in the information and communication before the start of the internal assessment,
  - the consultant might be asked to assist in the info gathering on indicators, etc.
- The philosophy behind this coaching is that the SHIFT-adviser helps to introduce the QMS within the city and that the next times -when a new assessment is required, 2-3 years later -, this self-assessment can be taken up by someone in the city as in CAF, not as in Bypad and also there would be no additional cost.

SHIFT-user cities that fulfill a number of pre-set process, output and possibly outcome criteria to a certain level could then apply for a Label that distinguishes them from other cities. So here, the Labels for different levels of achievement come in the picture. This label might only be rewarded after an external audit carried out by certified SHIFT-auditors. The previous chapter explains in more detail how the audit could work.

For more information:

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ANNEX OVERVIEW OF INDICATORS

http://www.ecomobility.org/shift/indicators

ICLEI - Local Governments for Sustainability, Bonn, Germany

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Traject s.a., Brussel, Belgium

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